

## SPECIFICATIONS

### Power Amplifier Section

#### Power Output

80 watts\* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.09% total harmonic distortion

#### Both Channels Driven into

8 ohms at 1,000 Hz	85 W + 85 W (Except U.S.A., Europe and U.K.)
4 ohms at 1,000 Hz	78 W + 78 W (Except U.S.A., Europe and U.K.)

Music Power Output (8 ohms)	145 W + 145 W (Except U.S.A., Europe and U.K.)
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#### Total Harmonic Distortion

AUX → SPKR (8 Ω)/ Power in → SPKR (8 Ω)  
(20 Hz to 20,000 Hz)

At Rated Output	0.09%
At 1/2 Rated Output	0.05%

(1,000 Hz)

At 1/2 Rated Output

Phono → SPKR (8 Ω)/ At -20 dB Volume Level

(1,000 Hz)

At Rated Output

#### Intermodulation Distortion (60 Hz : 7,000 Hz = 4 : 1)

At Rated Output

Damping Factor

#### Frequency Response

Overall (AUX → SPKR)

Phono "RIAA" Response

(Phono → REC out)

Power Bandwidth

#### Input Sensitivity/Impedance

Phono MM

Tuner, AUX., Tape Play

#### Signal-to-Noise Ratio (IHF-A)

Phono MM

Phono MM

Tuner, AUX., Tape Play

#### Phono Maximum Input Level

MM

#### Output Level/Impedance

Tape REC (Pin)

#### Tone Control

60 Hz, 150 Hz, 400 Hz, 1,000 Hz, 2,400 Hz,  
6,000 Hz, 15,000 Hz

#### Filter

Subsonic

#### Loudness Control

At -30 dB Volume Level

#### General

Power Supply Voltage, Frequency

Power Consumption

#### AC Outlet

Switched

Unswitched

#### Dimensions

W 420 mm

H 109 mm

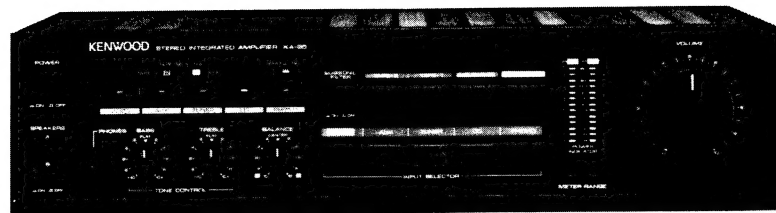
D 282 mm

#### Weight

Net

Gross

\*Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.



## SPECIFICATION

(IHF'66)

Except European and U.K. Models

### Power Amplifier Section

#### Rated Power Output

125 watts per channel minimum RMS, both channels driven at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.05% total harmonic distortion

Both Channels Driven into 8 ohms at 1 kHz ..... 125 W + 125 W (Except USA, Europe and U.K.)

#### Total Harmonic Distortion (AUX - SPKR 8 Ω)

at Rated Output, 20 Hz ~ 20,000 Hz ..... 0.05%  
at 1/2 Rated Output, 20 Hz ~ 20,000 Hz ..... 0.02%  
at 1/2 Rated Output, 1 kHz ..... 0.007%

#### (PHONO - SPKR 8 Ω : at -20 dB VOLUME Level)

at Rated Output, 1 kHz ..... 0.02%

#### Intermodulation Distortion

(60 Hz:7 kHz = 4:1) ..... 0.02% at rated power

into 8 ohms

Damping Factor ..... 20 (1,000 Hz into 8 ohms)

Frequency Response ..... 10 Hz to 100 kHz,

+0 dB, -3 dB

#### Input Sensitivity/Impedance

Phono MM ..... 2.5 mV/47 k ohms

TUNER, AUX., TAPE PLAY ..... 150 mV/33 k ohms

#### Signal-to-Noise Ratio (IHF-A)

Phono MM ..... 73 dB for 2.5 mV input

Phono MM ..... 79 dB for 5.0 mV input

TUNER, AUX., TAPE PLAY ..... 100 dB

Maximum Input Level for Phono MM ..... 140 mV (RMS), T.H.D. 0.05% at 1 kHz

#### Output Level/Impedance

TAPE REC (Pin) ..... 150 mV/3.3 k ohms

Frequency Response for Phono ..... RIAA standard curve  $\pm 0.3$  dB  
(30 Hz to 20,000 Hz)

#### Tone Control

Bass .....  $\pm 10$  dB at 100 Hz

Treble .....  $\pm 8$  dB at 10 kHz

Loudness Control (at -30 dB VOLUME Level) ..... +8 dB at 100 Hz

Subsonic Filter ..... 18 Hz, 6 dB/oct.

#### General

Power Consumption ..... 4.1 A (USA and Canada : UL and CSA)

230 W (Others)

AC Outlets ..... Switched 2, Unswitched 1

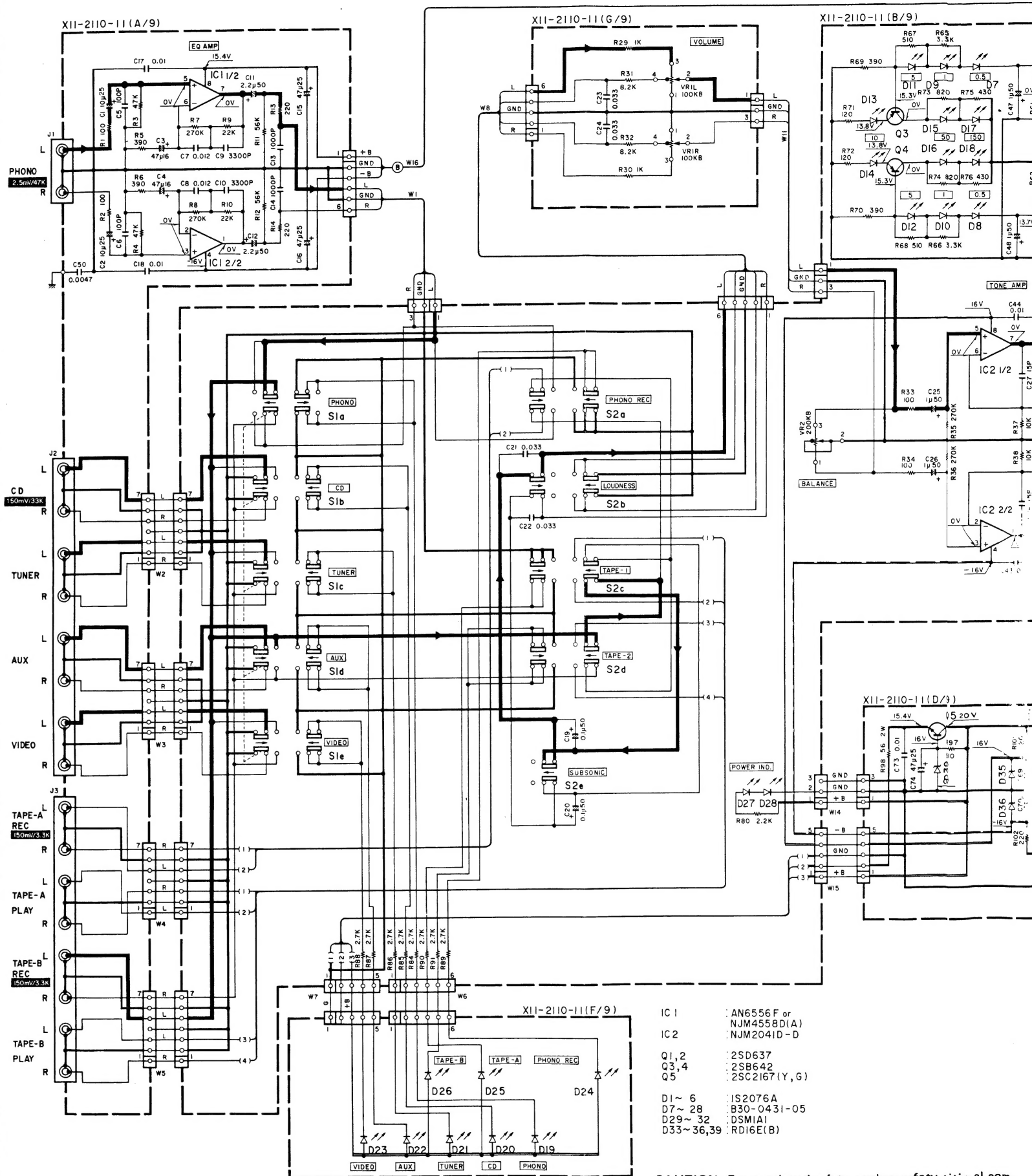
(Except some countries)

Dimensions ..... W: 420 mm (16-9/16")

H: 109 mm (4-5/16")

D: 280 mm (11")

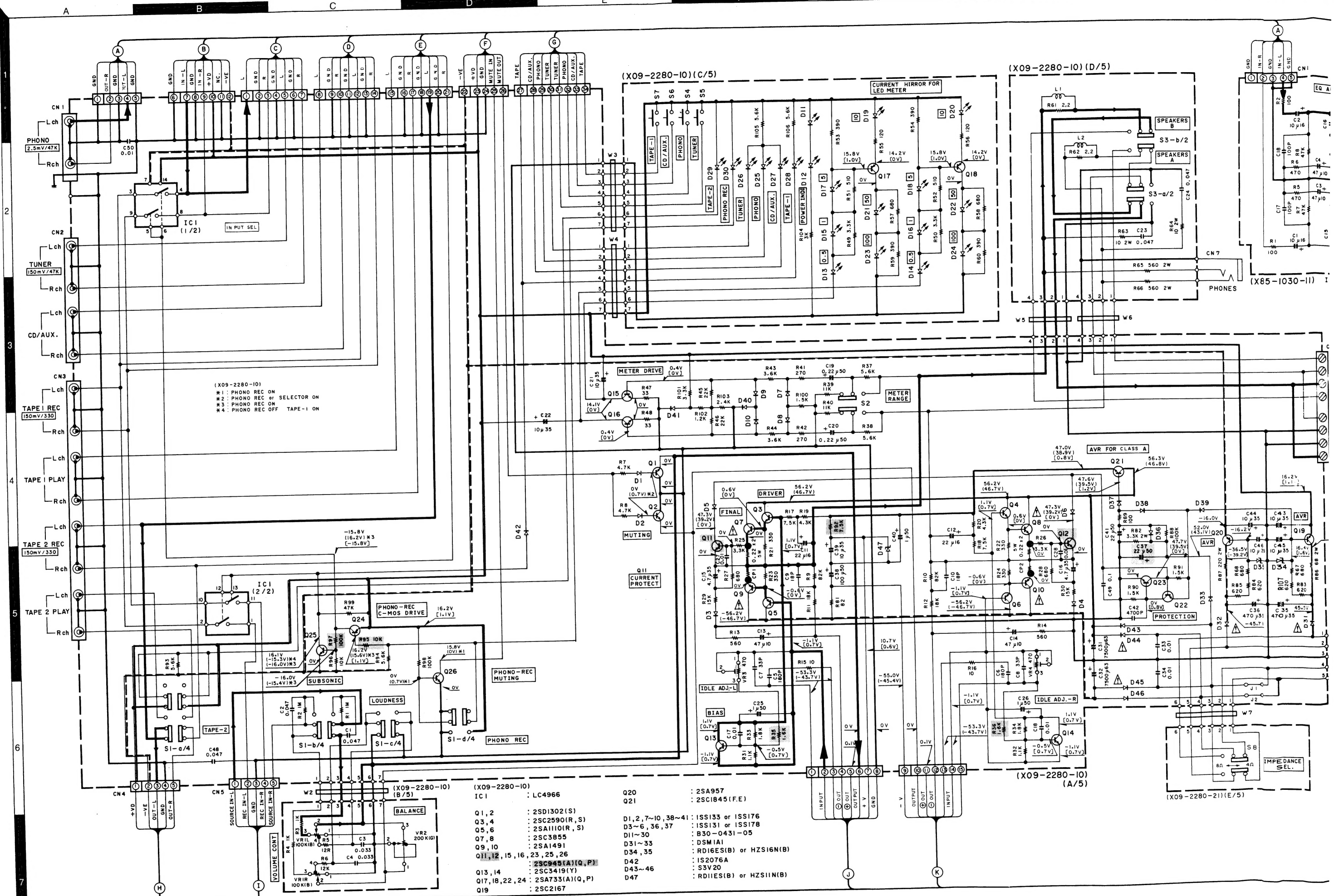
Weight (Net) ..... 8.5 kg (18.7 lb)



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance







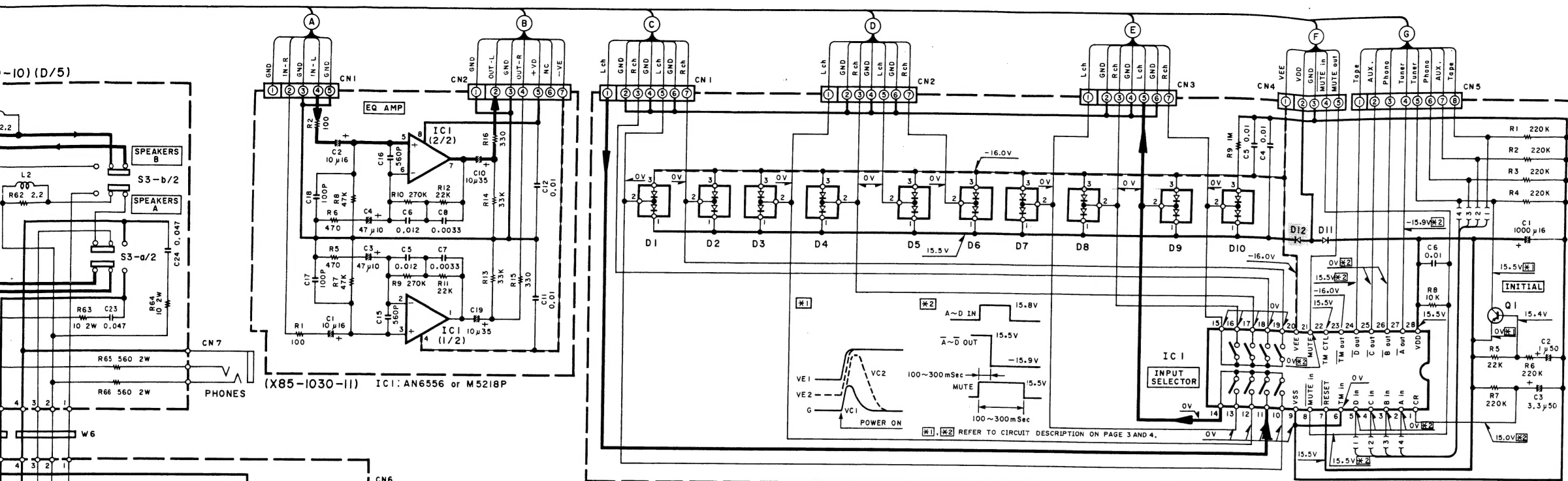
- (X09-2280-10) (C/5)
- IC1 : LC4966
- Q1, 2 : 2SD1302(S)
- Q3, 4 : 2SC2590(R, S)
- Q5, 6 : 2SA1110(R, S)
- Q7, 8 : 2SC3855
- Q9, 10 : 2SA1491
- Q11, 12, 15, 16, 23, 25, 26 : 2SC945(A)(Q, P)
- Q13, 14 : 2SC3419(Y)
- Q17, 18, 22, 24 : 2SA733(A)(Q, P)
- Q19 : 2SC2167
- Q20 : 2SA957
- Q21 : 2SC1845(F, E)
- D1, 2, 7~10, 38~41 : 1SS133 or 1SS176
- D3~6, 36, 37 : 1SS131 or 1SS178
- D11~30 : B30-0431-05
- D31~33 : DSM1A1
- D34, 35 : RD16ES(B) or HZS16N(B)
- D42 : IS2076A
- D43~46 : S3V20
- D47 : RD11ES(B) or HZS11N(B)

(X09-2280-10) (D/5)

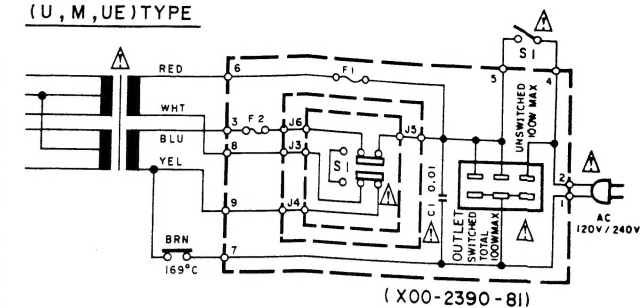
(X09-2280-10) (A/5)

(X09-2280-21) (E/5)

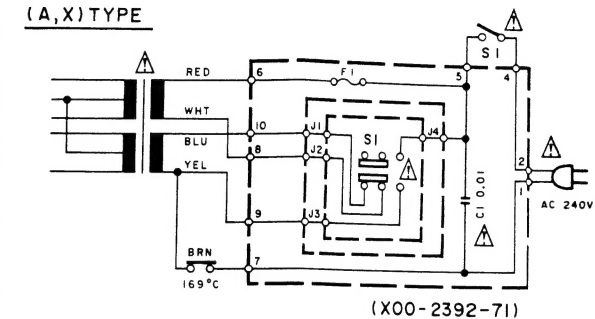
(10) (D/5)



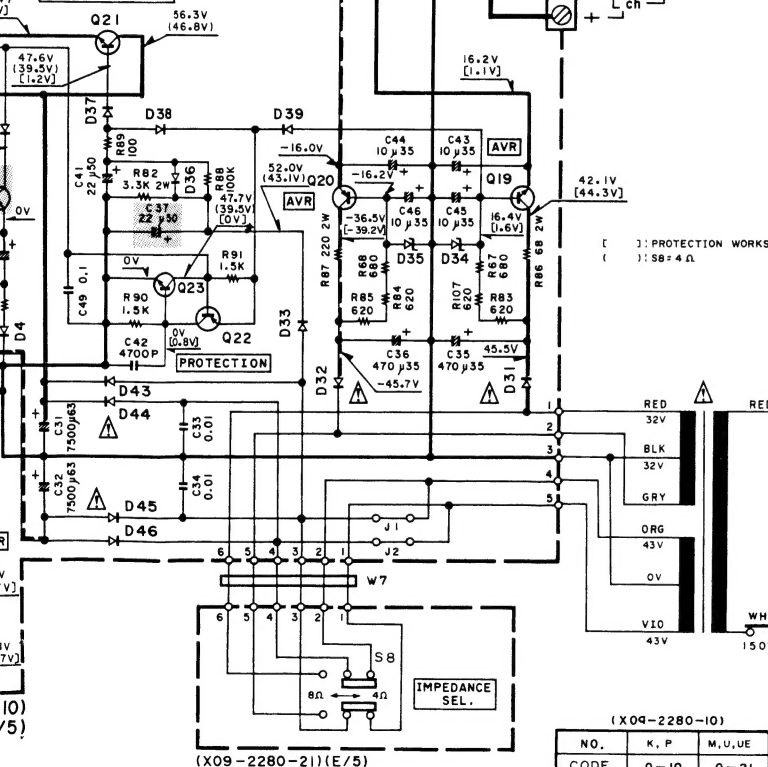
(U, M, UE) TYPE



(A, X) TYPE

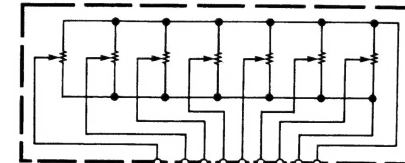


AVR FOR CLASS A

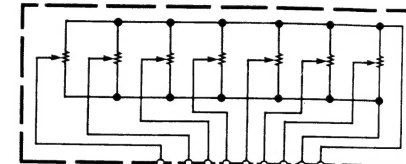


NO.	K, P	M, U, UE
CODE	0-10	0-21
J1, 2	YES	NO
W7	NO	YES
S8	NO	YES

(R29-5006-05)



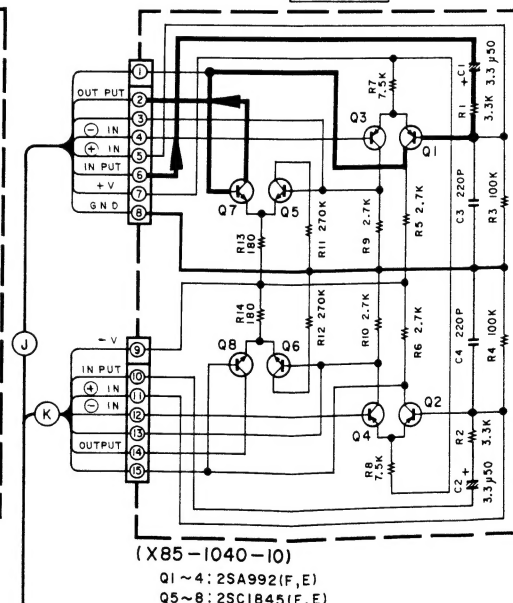
(R29-5006-05)

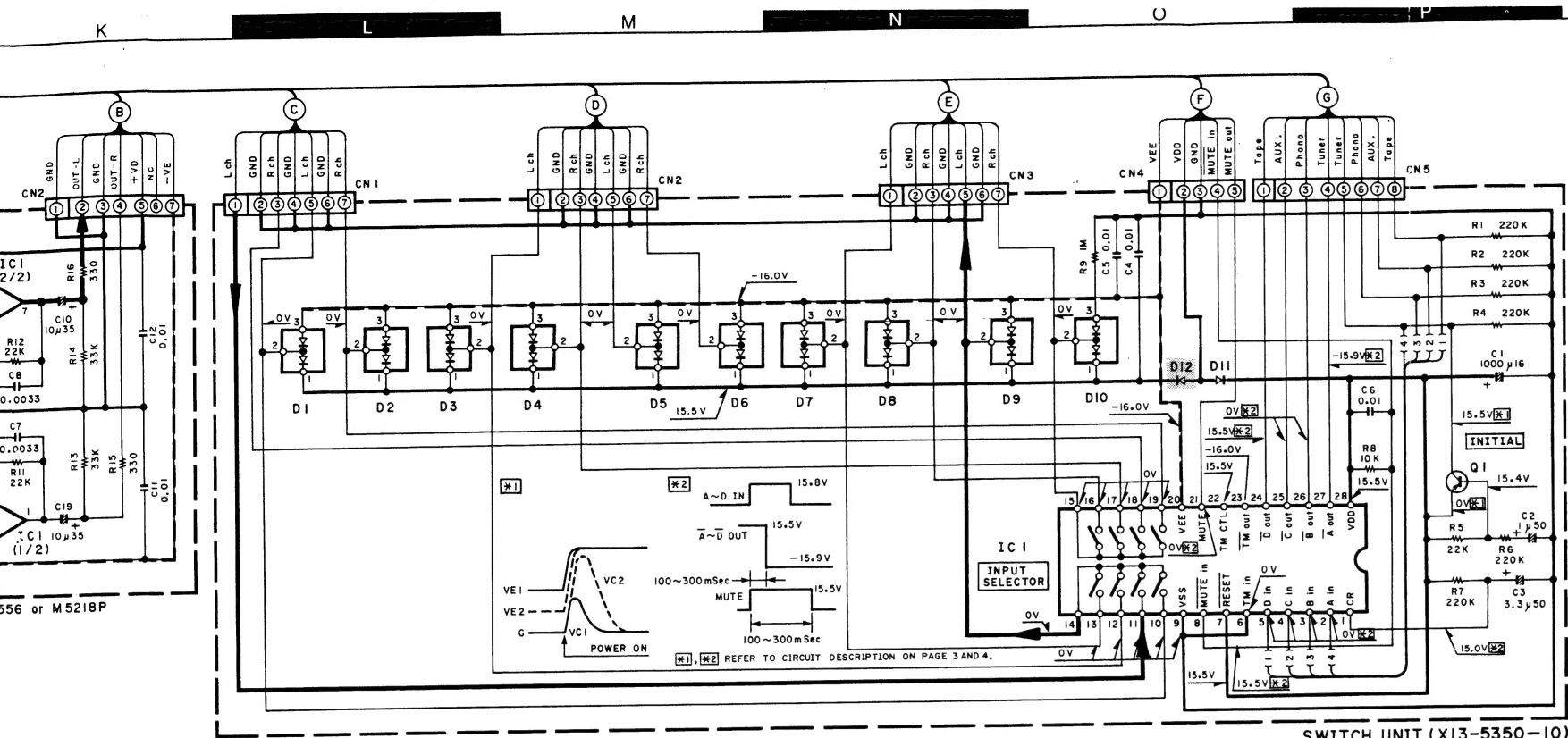


TONE UNIT (X11-2250-10)  
IC1, 2: M5229P

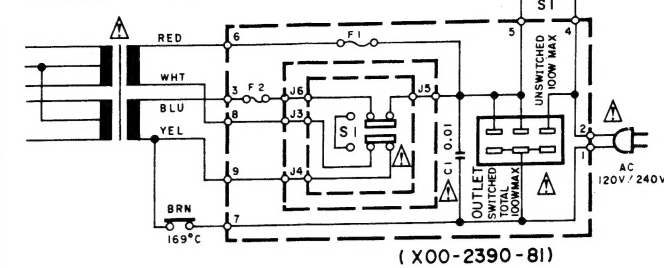
Change (X09-2280-10)  
C37 = 22μ50 → 4.7μ63 (NP)  
R35, 36 = 1.6K → 1.3K  
R92 = 7.5K → 3.3K  
R95 = 10K → 1K  
R97 = 100K → 10K  
Q11, 12 = 2SC945 (A, K, P) → 2SC1845 (F, E)

A CLASS AMP

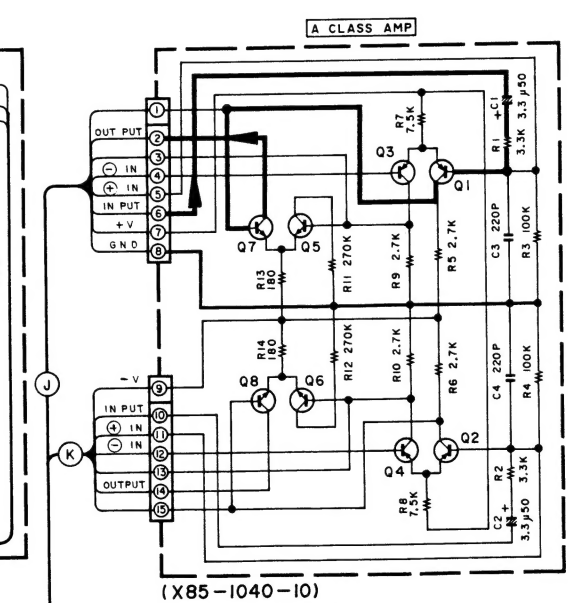
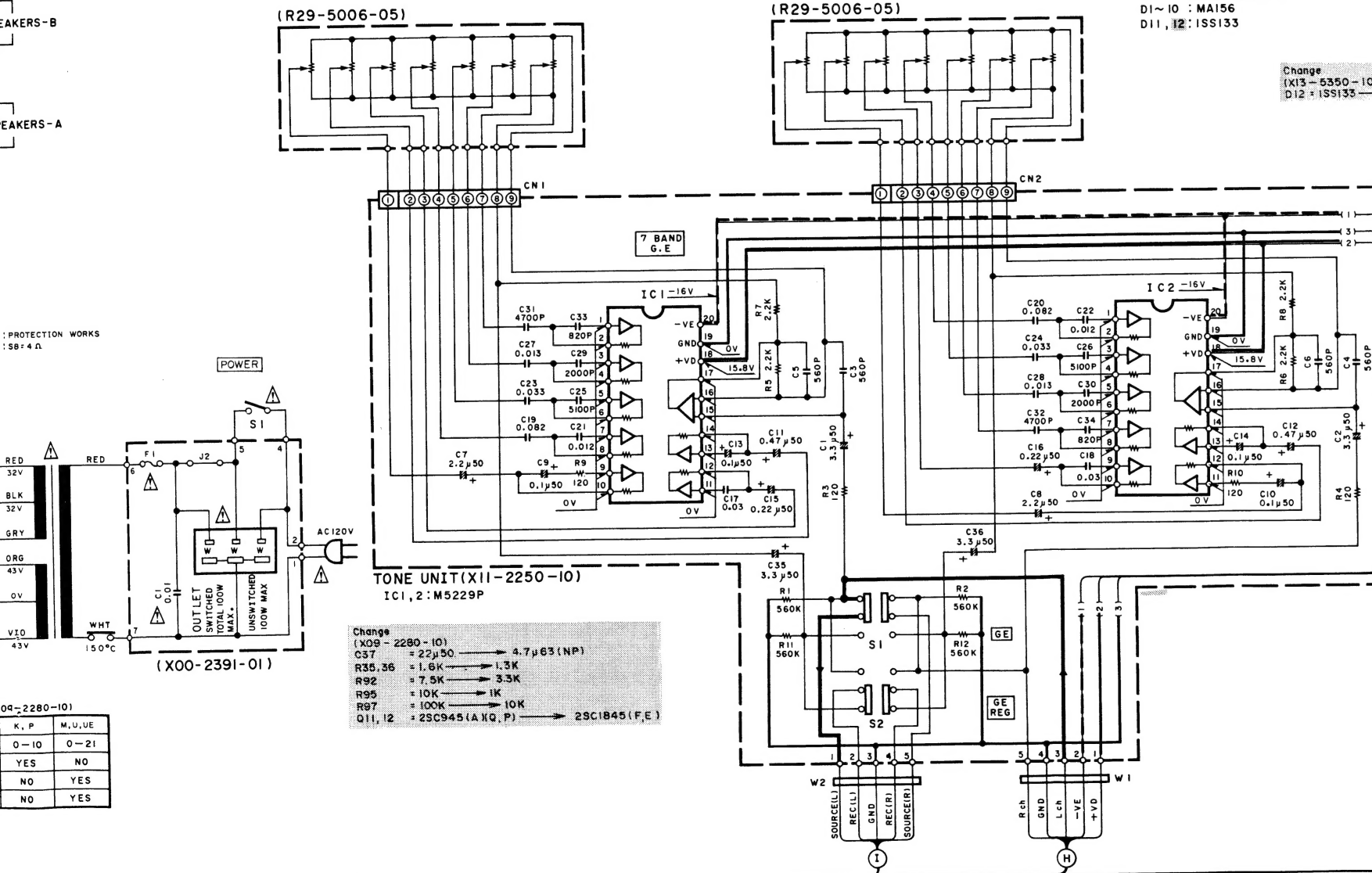
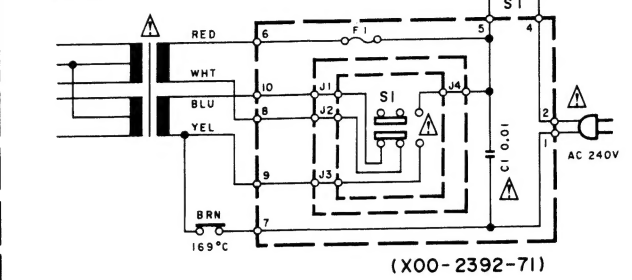




(U, M, UE) TYPE



(A, X) TYPE



- 2SA733(A) 2SC945(A)
- 2SA992 2SD1302
- 2SC1845
- 2SA1110 2SC2590
- 2SA957 2SC2167
- 2SA1491 2SC3855
- 2SC3419
- M5229P
- AN6556 M5218P
- LC7816
- LC4966

**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or units.